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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,562	10/03/2003	Geoffrey R. Heintzelman	ORT 1662-CIP.2	2537

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EXAMINER	
SHIAO, REI TSANG	

ART UNIT	PAPER NUMBER
1626	

DATE MAILED: 10/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.	**Applicant(s)**	
10/678,562	HEINTZELMAN ET AL.	
Examiner	**Art Unit**	
Robert Shiao	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *responses filed on 08/04/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,7-11 and 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,7-11 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *1/12/05, 4/19/04*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

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DETAILED ACTION

1. The instant non-provisional application is filed on 10/03, 2003.

2. Amendment of claim 1 and cancellation of claims 4-6, 12-17, and 19-26 in the amendment filed on August 04, 2005, is acknowledged. Claims 1-3, 7-11, and 18 are pending in the application.

Responses to Election/Restrictions

2. Applicant's election with traverse of Group II claims 1-3, 7-11, and 18, in part, in the reply filed on August 04, 2005, is acknowledged. Applicants also elect a single species shown as example No. 53 in Table 1 on page 32. It is noted that the variable R_{3a} of the compound No. 53 of formula (I) represents piperidine, and the variable R_2 of the compound No. 53 of formula (I) represent phenyl. The traversal is on the grounds that the restriction requirement of Groups I-VI do not show an acquired a separate status in the art. This is found not persuasive, and the reasons are given, *infra*.

Status of the Claims

3. Claims 1-3, 7-11, and 18 are pending in the application. The scope of the invention of the elected subject matter is as follows.

Claims 1-3, 7-11, and 18, in part, drawn to compounds/compositions of formula (I), wherein the variables X, R_2 and R_4 independently does not represent heteroaryl or heterocyclyl thereof, variable X, R_2 and R_4 independently is not substituted with heteroaryl or heterocyclyl; the heteroaryl or heterocycle of the variable R_3 represents piperidine, morpholine, pyridine, or piperazine thereof.

The above mentioned withdrawn compounds which are withdrawn from consideration as being for non-elected subject matter differ materially in structure and composition from the compounds of the elected invention. The withdrawn compounds/compositions and methods of use contain varying functional groups of the formula (I) having heteroaryl or heterocycle moiety, i.e., thiazole, thiophene, azepane, or furanyl moiety, which differ from those of the elected invention having pyrimidine moiety (i.e., classified in class 544 subclass 242(+), which are chemically recognized to differ in structure and function and not belong a common special technical features and belong to a separate status in the art. This recognized chemical diversity of the functional groups can be seen by the various classifications of these functional groups in the U.S. classification system, i.e., class 548 subclass 146(+) (thiazole), class 546 subclass 249(+) (pyridyl), class 549 subclass 83(+) (thiophene), class 540 subclass 484(+) (azepane), class 549 subclass (200+) (furan), etc. Therefore, again, the compounds which are withdrawn from consideration as being for non-elected subject matter differ materially in structure and composition and have been restricted properly.

The group set forth in the claims includes both independent and distinct inventions, and patentably distinct compounds (or species) within each invention. However, this application discloses and claims a plurality of patentably distinct inventions far too numerous to list individually. Moreover, each of these inventions contains a plurality of patentably distinct compounds, also far too numerous to list individually. Moreover, the examiner must perform a commercial database search on the subject matter of each group in addition to a paper search, which is quite burdensome to the examiner.

Claims 1-3, 7-11, and 18, in part, embraced in above elected subject matter, are prosecuted in the case. Claims 1-3, 7-11, and 18, in part, not embraced in above elected subject matter, are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention.

The requirement is still deemed proper and is therefore made **FINAL**.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 7-11, and 18 are rejected under 35 U.S.C. 102 (a) as being anticipated by Ito et al. JP 2001139556, see CAS: 134:366812. Claims 1-3, 7-11, and 18 are rejected under 35 U.S.C. 102 (b) as being anticipated by (1) Rosowsky et al. publication, Journal of Heterocyclic Chemistry (1999), 36(2),723-728, see CAS: 131 :214250; (2)Gorlitzer et al. publication, Pharmazie (1997), 52(9), 670-672, see CAS: 127:331459; (3) Watanabe et al. JP 08240921, see CAS: 126:13066; (4) Umeda et al WO 9308167, see CAS: 119:203428; (5) El-Rayyes et al. publication, Journal of Chemical and Engineering Data (1987), 32(4), 481-3, see CAS: 107: 175990; (6)

Kandeel et al. publication, Pakistan Journal of Scientific and Industrial Research, (1986), 29(6), 424-6, see CAS: 107:77748; (7) Burger et al. publication, Liebigs Annalen der Chemie (1984), (5), 991-1002, see CAS: 101:90866; (8) Augustin et al. publication, Journal fuer Praktische Chemie (Leipzig) (1979), 321(2), 205-14, see CAS: 91:56670; (9) Sengupta et al. publication, Journal of Organic Chemistry (1972), 37(9), 1323-8, see CAS: 77:19601; or (10) Demerac et al. publication, Australian Journal of Chemistry, 1972, 25(12), 2651-7.

Applicants claim pyrimidine compounds/compositions of formula (I), and the compound is found on pages 3-41 of the specification.

Ito et al. disclose eight compounds which are 5H-Indeno[1,2-d]pyrimidin-5-one, 4-[[(3-chloro-4-methoxyphenyl)methyl]amino]-, 5H-Indeno[1,2-d]pyrimidin-5-one, 4-[[(3-chloro-4-methoxyphenyl)methyl]amino]-2-methoxy-, 5H-Indeno[1,2-d]pyrimidin-5-one, 4-[[(3-chloro-4-methoxyphenyl)methyl]amino]-2-(dimethylamino)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 4-[[(3-chloro-4-methoxyphenyl)methyl]amino]-2-(phenylamino)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 4-[[(3-chloro-4-methoxyphenyl)methyl]amino]-2-(diethoxymethyl)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 2-methoxy-4-(methylthio)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 2-(diethoxymethyl)-4-(methylthio)-, 5H-Indeno[1,2-d]pyrimidin-5-one, and 4-[[(3-chloro-4-methoxyphenyl)methyl]amino]-2-(1-hydroxyethyl). Ito et al. compounds clearly anticipate the instant compound of formula (I), wherein the variable X represents C=O; the variable R_3 represents hydrogen; the variable R_2 represents alkylthio (i.e., methylthio), $NR_{24}R_{25}$, and R_{24} represents H, R_{25} represents arylalkyl; the variable R_4 represents hydrogen, OR_{17}, and R_{17} represents alkyl (i.e., methyl), or NR_{17} R_{18}, R_{17} or R_{18} independently represents hydrogen or alkyl (i.e., methyl), aryl (i.e., phenyl), or alkyl (i.e., methyl) substituted with alkoxy (i.e., ethoxy) or hydroxyl, see RN:340164-69-4, 340164-80-9, 340164-82-1, 340164-83-2, 340164-84-3, 150365-49-4, 340165-03-9, and 340165-12-0.

Rosowsky et al. disclose a compound 5H-Indeno[1,2-d]pyrimidine-2,4-diamine, see RN: 95140-64-0. Rosowsky et al. compound clearly anticipate the instant compound of formula (I), wherein the variable X represents CH_2, the variable R_3 represents hydrogen; the variable R_2 represents $NR_{24}R_{25}$, and both R_{24} and R_{25} represents H; the variable R_4 represents $NR_{17}R_{18}$, and both R_{17} and R_{18} represents hydrogen.

Gorlitzer et al. disclose five compounds which are Phenol, 2-[(diethylamino)methyl]-4-(5H-indeno[1,2-d]pyrimidin-4-ylamino)-, 5H-Indeno[1,2-d]pyrimidin-4-amine, N-(2-methylphenyl)-, 1,4-Pentanediamine, N1,N1-diethyl-N4-5H-indeno[1,2-d]pyrimidin-4-yl-, 5H-Indeno[1,2-d]pyrimidin-4-amine, 5H-Indeno[1,2-d]pyrimidin-4-amine, N-(2-methylphenyl)-, See RN: 197861-28-2, 197861-29-3, 197861-30-6, 197861-25-9, and 197861-31-7. Rosowsky et al. compound clearly anticipate the instant compound of formula (I), wherein the variable X represents CH_2, the variable R_3 represents hydrogen; the variable R_2 represents $NR_{24}R_{25}$, and both R_{24}

and R_{25} represents H, the variable R_4 represents $NR_{17}R_{18}$, and R_{17} and R_{18} independently represents hydrogen, substituted alkyl (i.e., pentyl) or aryl (i.e., phenyl); the variable R_4 represents H.

Watanabe et al. disclose a compound 5H-Indeno[1,2-d]pyrimidin-5-one, 2,4-dimethyl-, clearly anticipate the instant compound of formula (I), wherein the variable X represents C=O, the variable R_3 represents hydrogen; the variable R_2 represents alkyl (i.e., methyl); the variable R_4 represents alkyl (i.e., methyl), see RN: 39560-81-1.

Umeda et al. disclose 13 compounds which are 5H-Indeno[1,2-d]pyrimidin-5-one, 2-methyl-4-(methylthio)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 2-amino-4-(methylthio)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 4-(methylthio)-2-(phenylmethyl)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 4-(methylthio)-2-(2-phenylethyl)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 2-(1,1-dimethylethyl)-4-(methylthio)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 2-(dimethylamino)-4-(methylthio)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 2-(methylamino)-4-(methylthio)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 2-(dimethylamino)-4-(ethylthio)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 2-(methoxymethyl)-4-(methylthio)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 4-(methylthio)-2-(phenylamino)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 2-(methylphenylamino)-4-(methylthio)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 2-[[2-(dimethylamino)ethyl]methylamino]-4- (methylthio)-, 5H-Indeno[1,2-d]pyrimidin-5-one, 2-[[2-(dimethylamino)ethyl]amino]-4- (methylthio)-, see RN: 70760-89-3, 70760-90-6, 150365-41-6,150365-42-7, 150365-43-8, 150365-50-7,150365-56-3, 150365-62-1, 150365-64-3,150365-65-4, 150365-66-5, 150365-80-3, and150365-82-5. Umeda et al.

compounds clearly anticipate the instant compounds of formula (I), wherein the variable X represents C=O, the variable R_3 represents hydrogen; the variable R_2 represents alkylthio (i.e., methylthio or ethylthio); the variable R_4 represents alkyl (i.e., methyl, butyl), substituted alkyl (i.e., methyl substituted with methoxy), or the variable R_4 represents NR_{17} R_{18}, and R_{17} and R_{18} independently represents hydrogen, alkyl (i.e., methyl) or aryl (i.e., phenyl), substituted alkyl (i.e., ethyl), or alkyl (i.e., ethyl) substituted with aryl (i.e., phenyl).

El-Rayyes et al. disclose seven compounds which are 5H-Indeno[1,2-d]pyrimidin-2-amine, 4-(4-chlorophenyl)-, 5H-Indeno[1,2-d]pyrimidin-2-amine, 4-(1-naphthalenyl)-, 5H-Indeno[1,2-d]pyrimidin-2-amine, 4-phenyl-, 5H-Indeno[1,2-d]pyrimidin-2-amine, 4-(4-methoxyphenyl)-, 5H-Indeno[1,2-d]pyrimidin-2-amine, 4-(3-methoxyphenyl)-, 5H-Indeno[1,2-d]pyrimidin-2-amine, 4-(4-bromophenyl)-, and 5H-Indeno[1,2-d]pyrimidin-2-amine, 4-(3-bromophenyl). El-Rayyes et al. compound clearly anticipate the instant compound of formula (I), wherein the variable X represents CH_2, the variable R_3 represents hydrogen; the variable R_2 represents aryl (i.e., phenyl, naphthalene), substituted aryl (I.e., phenyl substituted with Cl, Br, or methoxy); the variable R_4 represents NR_{17} R_{18}, and both R_{17} and R_{18} represents hydrogen, see RN: 110117-40-3, 110117-42-5, 110117-35-6, 110117-36-7, 110117-37-8,110117-38-9, and110117-39-0.

Kandeel et al. disclose a compound 5H-Indeno[1,2-d]pyrimidin-5-one, 4-amino-6-nitro-, clearly anticipate the instant compound of formula (I), wherein the variable X represents C=O, the variable R_3 represents nitro; the variable R_2 represents $NR_{24}R_{25}$, and both R_{24} and R_{25} represents H, the variable R_4 represents hydrogen, see RN: 109673-05-4.

Burger et al. disclose a compound 5H-Indeno[1,2-d]pyrimidine, 2,4-bis(trifluoromethyl)-, clearly anticipate the instant compound of formula (I), wherein the variable X represents CH_2, the variable R_3 represents H; the variable R_2 represents substituted alkyl (i.e., methyl substituted with fluoro), the variable R_4 represents alkyl (I.e., methyl) substituted with fluoro, see RN: 91474-24-7.

Augustin et al. disclose two compounds 5H-Indeno[1,2-d]pyrimidin-5-one, 2-methyl-4-(methylthio)- and 5H-Indeno[1,2-d]pyrimidin-5-one, 2-amino-4-(methylthio). Augustin et al. clearly anticipate the instant compound of formula (I), wherein the variable X represents C=O, the variable R_3 represents hydrogen; the variable R_2 represents alkylthio (i.e., methylthio); the variable R_4 represents alkyl (i.e., methyl), or the variable R_4 represents NR_{17} R_{18}, and both R_{17} and R_{18} represents hydrogen, see RN: 70760-89-3 or 70760-90-6.

Sengupta et al. disclose a compound 5H-Indeno[1,2-d]pyrimidine-2,4-diamine, clearly anticipate the instant compound of formula (I), wherein the variable X represents CH_2, the variable R_3 represents H; the variable R_2 represents $NR_{24}R_{25}$, and both R_{24} and R_{25} represents H, the variable R_4 represents NR_{17} R_{18}, and both R_{17} and R_{18} represents hydrogen, see RN: 33987-16-5.

Demerac disclose eight compounds clearly anticipate the instant compound of formula (I), wherein the variable X represents C=O, the variable R_3 represents hydrogen; the variable R_2 represents alkyl (i.e., methyl) or substituted alkyl (i.e., alkyl substituted with Br); the variable R_4 represents H, alkyl (i.e., methyl), $NR_{17}R_{18}$, and both R_{17} and R_{18} represents hydrogen, alkyl substituted halogen (i.e., methyl substituted with F, Cl or Br), see page 2652, compound No. (5), or page 2654, compounds No. (9), (10), or (11).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

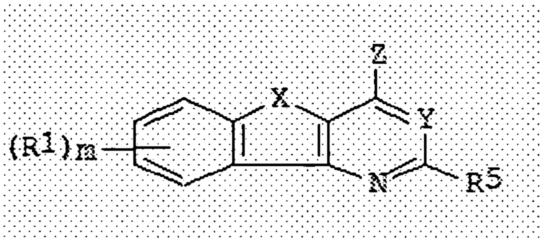
"Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Also see M.P.E.P. 2113.

6. Claims 1-3, 7-11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. JP 2001139556, see CAS: 134:366812.

Applicants claim pyrimidine compounds/compositions of formula (I), and the compound is found on pages 3-41 of the specification.

Determination of the scope and content of the prior art (MPEP §2141.01)

Ito et al. disclose pyrimidine compounds of the formula (I),



I

, wherein the variable m is 0-4, the variable R^1 represents NO2, halo; the variable X represents CH2 or CO; the variable Y represents N or CH, the variable Z represents NHCR2R3R4, and R2, R3, and R4 independently represents H, halo, OH or alkoxy, phenyl, see DN: 134:366812. A number of compounds are specifically exemplified, see RN: 340164-69-4, 340164-80-9, 340164-82-1, 340164-83-2, 340164-84-3, 150365-49-4, 340165-03-9, and 340165-12-0.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between instant pyrimidine compounds and Ito et al. is that the variable Y of Ito et al. represents Nor CH, while the instant claims represents N at the same position.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the claims 1-3, 7-11, and 18 prima facie obvious because one would be motivated to employ the compounds of Ito et al. to obtain instant compounds/compositions, wherein the variables X, R_2 and R_4 independently does not represent heteroaryl or heterocyclyl thereof, variable X, R_2 and R_4 independently is not substituted with heteroaryl or heterocyclyl; the heteroaryl or heterocycle of the variable R_3 represents piperidine, morpholine, pyridine, or piperazine thereof.

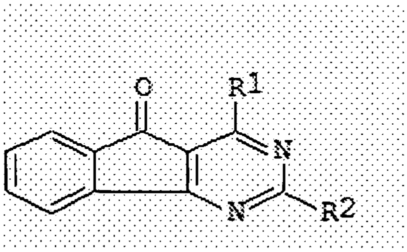
The motivation to make the claimed compounds derives from the expectation that the instant claimed compounds derived from known Ito et al. compounds would possess similar activity (i.e., agents for pharmarceuticals) to that which is claimed in the reference.

7. Claims 1-3, 7-11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. JP 08240921, see CAS: 126:13066.

Applicants claim pyrimidine compounds/compositions of formula (I), and the compound is found on pages 3-41 of the specification.

Determination of the scope and content of the prior art (MPEP §2141.01)

Watanabe et al. disclose pyrimidine compounds of the formula (I),



I

, wherein the variable R1-R2 represents haloalkyl or alkyl. A number of compounds are specifically exemplified, see RN: 39560-81-1.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between instant pyrimidine compounds and Watanabe et al. is that the variable R2 of Watanabe et al. represents alkyl or haloalkyl, while the instant claims represents hydrogen or alkyl at the same position.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the claims 1-3, 7-11, and 18 prima facie obvious because one would be motivated to employ the compounds of Watanabe et al. to obtain instant compounds/compositions, wherein the variables X, R_2 and R_4 independently does not represent heteroaryl or heterocyclyl thereof, variable X, R_2 and R_4 independently is not substituted with heteroaryl or heterocyclyl; the heteroaryl or heterocycle of the variable R_3 represents piperidine, morpholine, pyridine, or piperazine thereof.

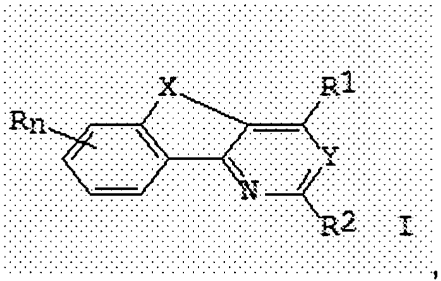
The motivation to make the claimed compounds derives from the expectation that the instant claimed compounds derived from known Watanabe et al. compounds would possess similar activity (i.e., agents for pharmarceuticals) to that which is claimed in the reference.

8. Claims 1-3, 7-11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umeda et al. WO 9308167, see abstract.

Applicants claim pyrimidine compounds/compositions of formula (I), and the compound is found on pages 3-41 of the specification.

Determination of the scope and content of the prior art (MPEP §2141.01)

Umeda et al. disclose pyrimidine compounds of the formula (I),



, wherein the variable R represents H, alkyl, alkoxy, alkylyhio; n is 1-4; the variable Y represents N or CH; R1-R2 represents H, alkyl, alkoxy , alkylsulfinyl; the variable X represents CH2 or CO; haloalkyl or alkyl. A number of compounds are specifically exemplified, see RN: 70760-89-3, 70760-90-6, 150365-41-6, or150365-42-7.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between instant pyrimidine compounds and Umeda et al. is that the variable Y of Umeda et al. represents N or CH, while the instant claims represents N at the same position.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the claims 1-3, 7-11, and 18 prima facie obvious because one would be motivated to employ the compounds of Umeda et al. to obtain instant compounds/compositions, wherein the variables X, R_2 and R_4 independently does not represent heteroaryl or heterocyclyl thereof, variable X, R_2 and R_4 independently is not substituted with heteroaryl or heterocyclyl; the heteroaryl or heterocycle of the variable R_3 represents piperidine, morpholine, pyridine, or piperazine thereof.

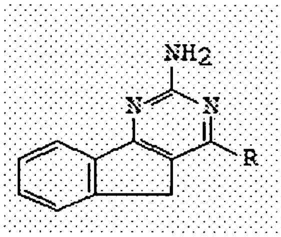
The motivation to make the claimed compounds derives from the expectation that the instant claimed compounds derived from known Umeda et al. compounds would possess similar activity (i.e., agents for pharmarceuticals or bactericide) to that which is claimed in the reference.

9. Claims 1-3, 7-11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over El-Rayyes et al. publication, Journal of Chemical and Engineering Data (1987), 32(4), 481-3, see CAS: 107: 175990.

Applicants claim pyrimidine compounds/compositions of formula (I), and the compound is found on pages 3-41 of the specification.

Determination of the scope and content of the prior art (MPEP §2141.01)

El-Rayyes et al. disclose pyrimidine compounds of the formula (II),



II, wherein the variable R represents (un)substititued phenyl or naphthyl. A number of compounds are specifically exemplified, see RN: 110117-40-3, 110117-42-5, 110117-35-6, 110117-36-7, 110117-37-8,110117-38-9, and110117-39-0.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between instant pyrimidine compounds and El-Rayyes et al. is that the variable R_3 of instant claims represent hydrogen or alkyl, while El-Rayyes et al. represents hydrogen at the same position.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the claims 1-3, 7-11, and 18 prima facie obvious because one would be motivated to employ the compounds of El-Rayyes et al. to obtain instant compounds/compositions, wherein the variables X, R_2 and R_4 independently does not represent heteroaryl or heterocyclyl thereof, variable X, R_2 and R_4 independently is not substituted with heteroaryl or heterocyclyl; the heteroaryl or heterocycle of the variable R_3 represents piperidine, morpholine, pyridine, or piperazine thereof.

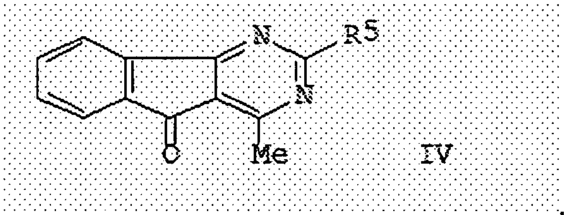
The motivation to make the claimed compounds derives from the expectation that the instant claimed compounds derived from known El-Rayyes et al. compounds would possess similar activity (i.e., agents for pharmarceuticals) to that which is claimed in the reference.

10. Claims 1-3, 7-11, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Augustin et al. publication, Journal fuer Praktische Chemie (Leipzig) (1979), 321(2), 205-14, see CAS: 91:56670.

Applicants claim pyrimidine compounds/compositions of formula (I), and the compound is found on pages 3-41 of the specification.

Determination of the scope and content of the prior art (MPEP §2141.01)

Augustin et al. disclose pyrimidine compounds of the formula (IV),



, wherein the variable R5 represents methyl, NH2 or SMe. A number of compounds are specifically exemplified, RN: 70760-89-3 or 70760-90-6.

Determination of the difference between the prior art and the claims (MPEP §2141.02)

The difference between instant pyrimidine compounds and Augustin et al. is that the variable X of instant claims represent CO or CH_2, while Augustin et al. represents CO at the same position.

Finding of prima facie obviousness-rational and motivation (MPEP §2142-2143)

One having ordinary skill in the art would find the claims 1-3, 7-11, and 18 prima facie obvious because one would be motivated to employ the compounds of Augustin et al. to obtain instant compounds/compositions, wherein the variables X, R_2 and R_4 independently does not represent heteroaryl or heterocyclyl thereof, variable X, R_2 and R_4 independently is not substituted with heteroaryl or heterocyclyl; the heteroaryl or heterocycle of the variable R_3 represents piperidine, morpholine, pyridine, or piperazine thereof.

The motivation to make the claimed compounds derives from the expectation that the instant claimed compounds derived from known Augustin et al. compounds would possess similar activity (i.e., agents for pharmarceuticals) to that which is claimed in the reference.

Double Patenting

11. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

12. Claim 8 is provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claim 5 of copending Application No. 11/170,484. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

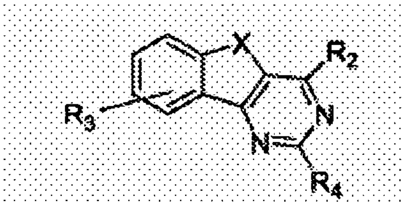
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 1-3, 7-11, and 18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 9 of Heintzelman et al. co-pending application No. 11/170,484. Although the conflicting claims are not identical, they are not patentably distinct from each other and reasons are as follows.

Applicants claim a pyrimidine compound/compositions of formula (I), and the instant compounds/compositions have been found on the pages 3-41 of the specification.

Heintzelman et al. claim a pyrimidine compounds/compositions of formula (I),



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The difference between the instant claims and Heintzelman et al. is that the the instant variable R_3 represents hydrogen, halo, piperidine, morpholine, pyridine, or piperazine, while Heintzelman et al. represents hydrogen or halo at the same position.

One having ordinary skill in the art would find the claims 1-3, 7-11, and 18 prima facie obvious because one would be motivated to employ the pyrimidine compounds of Heintzelman et al. to obtain instant compounds/compositions of formula (I), wherein the variables X, R_2 and R_4 independently does not represent heteroaryl or heterocyclyl thereof, variable X, R_2 and R_4 independently is not substituted with heteroaryl or heterocyclyl; the heteroaryl or heterocycle of the variable R_3 represents piperidine, morpholine, pyridine, or piperazine.

The motivation to make the claimed compounds/compositions derives from the expectation that the instant claimed compound/compositions from the known Heintzelman et al. pyrimidine compounds/compositions, would possess similar activity (i.e., treating Parkinson's disease) to that which is claimed in the reference.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Objection

15. Claims 1-3, 7-11, and 18 are objected to as containing non-elected subject matter, i.e., heteroaryl, heterocycle, t, pyridyl, thiophene, furane, etc. It is suggested that applicants amend the claims to the scope of the elected subject matter as defined on the pages 2-3 *supra*.

Telephone Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Shiao whose telephone number is (571) 272-0707. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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September 27, 2005